

COMPRESSOR DEFINITION

Designation	VEG T8HB
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513800060

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	230 / 53-150	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	BPM		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Fan	187 to 255 V	187 to 255 V
8.2 LBP (43°C Ambient temperature)	Fan	187 to 255 V	187 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	430	[ml] (14.54 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.77	[kg] (23.74 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-150 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC3CO2456XX	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	VCC3CO2456XX	
6 Start winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V1800RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature	-23.3°C (-9.94°F) 54.4°C (129.92°F)		
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
468	118	137	80	0.56	2.66	5.87	1.48	1.72

TEST CONDITIONS: @220V3000RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature	-23.3°C (-9.94°F) 54.4°C (129.92°F)		
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
875	221	256	146	0.98	4.97	6.01	1.51	1.76

TEST CONDITIONS: @220V4500RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature	-23.3°C (-9.94°F) 54.4°C (129.92°F)		
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1161	293	340	207	1.34	6.60	5.61	1.41	1.64

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1800RPM		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	237	60	69	46	0.40	1.34	5.22	1.32	1.53
-30	(-22)	364	92	107	57	0.45	2.06	6.34	1.60	1.86
-25	(-13)	510	129	149	68	0.50	2.90	7.43	1.87	2.18
-20	(- 4)	679	171	199	80	0.55	3.87	8.51	2.15	2.49
-15	(+ 5)	875	220	256	91	0.60	4.99	9.61	2.42	2.82
-10	(+14)	1101	277	323	103	0.65	6.31	10.75	2.71	3.15
-5	(+23)	1362	343	399	114	0.70	7.84	11.94	3.01	3.50

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V1800RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	220	55	64	47	0.37	1.24	4.71	1.19	1.38	
-30 (-22)	330	83	97	59	0.44	1.87	5.58	1.41	1.63	
-25 (-13)	463	117	136	72	0.52	2.63	6.46	1.63	1.89	
-20 (- 4)	622	157	182	84	0.59	3.54	7.39	1.86	2.17	
-15 (+ 5)	811	204	238	97	0.66	4.63	8.38	2.11	2.46	
-10 (+14)	1034	261	303	110	0.73	5.93	9.45	2.38	2.77	
-5 (+23)	1295	326	380	122	0.80	7.45	10.63	2.68	3.11	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V1800RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	199	50	58	47	0.36	1.13	4.19	1.06	1.23	
-30 (-22)	293	74	86	61	0.45	1.66	4.82	1.22	1.41	
-25 (-13)	413	104	121	75	0.53	2.34	5.53	1.39	1.62	
-20 (- 4)	562	142	165	89	0.62	3.20	6.32	1.59	1.85	
-15 (+ 5)	745	188	218	103	0.70	4.25	7.21	1.82	2.11	
-10 (+14)	965	243	283	117	0.78	5.53	8.24	2.08	2.41	
-5 (+23)	1227	309	359	130	0.87	7.06	9.41	2.37	2.76	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V1800RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	174	44	51	48	0.37	0.98	3.65	0.92	1.07	
-30 (-22)	252	63	74	63	0.46	1.43	4.07	1.03	1.19	
-25 (-13)	359	90	105	79	0.55	2.04	4.60	1.16	1.35	
-20 (- 4)	499	126	146	94	0.64	2.84	5.27	1.33	1.55	
-15 (+ 5)	676	170	198	110	0.73	3.86	6.10	1.54	1.79	
-10 (+14)	894	225	262	125	0.82	5.12	7.10	1.79	2.08	
-5 (+23)	1156	291	339	140	0.91	6.65	8.29	2.09	2.43	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	496	125	145	90	0.65	2.81	5.46	1.38	1.60	
-30 (-22)	666	168	195	108	0.74	3.77	6.22	1.57	1.82	
-25 (-13)	896	226	262	125	0.84	5.09	7.19	1.81	2.11	
-20 (- 4)	1186	299	347	142	0.94	6.75	8.34	2.10	2.45	
-15 (+ 5)	1535	387	450	159	1.04	8.77	9.63	2.43	2.82	
-10 (+14)	1943	490	569	176	1.14	11.14	11.01	2.77	3.23	
-5 (+23)	2410	607	706	194	1.23	13.86	12.43	3.13	3.64	

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	440	111	129	93	0.66	2.49	4.73	1.19	1.38	
-30 (-22)	611	154	179	114	0.78	3.46	5.39	1.36	1.58	
-25 (-13)	838	211	246	134	0.90	4.76	6.25	1.58	1.83	
-20 (- 4)	1122	283	329	154	1.02	6.38	7.26	1.83	2.13	
-15 (+ 5)	1461	368	428	174	1.15	8.34	8.38	2.11	2.45	
-10 (+14)	1854	467	543	194	1.27	10.62	9.55	2.41	2.80	
-5 (+23)	2302	580	675	215	1.39	13.25	10.74	2.71	3.15	

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	377	95	111	87	0.64	2.13	4.35	1.10	1.27	
-30 (-22)	550	139	161	112	0.78	3.12	4.91	1.24	1.44	
-25 (-13)	776	196	227	137	0.93	4.41	5.63	1.42	1.65	
-20 (- 4)	1054	266	309	162	1.08	6.00	6.48	1.63	1.90	
-15 (+ 5)	1383	348	405	187	1.23	7.89	7.41	1.87	2.17	
-10 (+14)	1763	444	517	211	1.37	10.10	8.36	2.11	2.45	
-5 (+23)	2193	553	643	236	1.52	12.61	9.30	2.34	2.73	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Fan			(Condensing temperature 65°C (+149°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	309	78	91	72	0.58	1.75	4.26	1.07	1.25	
-30 (-22)	485	122	142	104	0.75	2.75	4.69	1.18	1.38	
-25 (-13)	709	179	208	135	0.92	4.03	5.27	1.33	1.54	
-20 (- 4)	981	247	288	165	1.09	5.58	5.94	1.50	1.74	
-15 (+ 5)	1301	328	381	196	1.27	7.43	6.65	1.68	1.95	
-10 (+14)	1668	420	489	227	1.44	9.55	7.37	1.86	2.16	
-5 (+23)	2081	524	610	258	1.61	11.97	8.05	2.03	2.36	

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	711	179	208	150	0.96	4.02	4.73	1.19	1.39	
-30 (-22)	936	236	274	168	1.10	5.30	5.59	1.41	1.64	
-25 (-13)	1222	308	358	189	1.24	6.94	6.49	1.63	1.90	
-20 (- 4)	1575	397	461	212	1.38	8.96	7.43	1.87	2.18	
-15 (+ 5)	1998	503	585	236	1.52	11.41	8.44	2.13	2.47	
-10 (+14)	2496	629	731	262	1.66	14.30	9.51	2.40	2.79	
-5 (+23)	3072	774	900	288	1.80	17.67	10.66	2.69	3.12	

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	627	158	184	148	0.98	3.55	4.24	1.07	1.24	
-30 (-22)	854	215	250	170	1.12	4.84	5.04	1.27	1.48	
-25 (-13)	1136	286	333	194	1.27	6.45	5.86	1.48	1.72	
-20 (- 4)	1478	373	433	220	1.42	8.41	6.73	1.70	1.97	
-15 (+ 5)	1885	475	552	246	1.57	10.76	7.65	1.93	2.24	
-10 (+14)	2361	595	692	274	1.72	13.53	8.63	2.17	2.53	
-5 (+23)	2909	733	852	301	1.87	16.73	9.67	2.44	2.83	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	547	138	160	141	0.96	3.09	3.87	0.98	1.13
-30	(-22)	775	195	227	169	1.13	4.39	4.59	1.16	1.35
-25	(-13)	1053	265	309	197	1.29	5.98	5.33	1.34	1.56
-20	(- 4)	1385	349	406	227	1.46	7.88	6.11	1.54	1.79
-15	(+ 5)	1775	447	520	256	1.62	10.13	6.93	1.75	2.03
-10	(+14)	2228	561	653	286	1.79	12.76	7.80	1.97	2.29
-5	(+23)	2748	692	805	315	1.96	15.81	8.73	2.20	2.56

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Fan			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	471	119	138	131	0.91	2.66	3.61	0.91	1.06
-30	(-22)	700	176	205	164	1.10	3.97	4.24	1.07	1.24
-25	(-13)	973	245	285	198	1.29	5.53	4.89	1.23	1.43
-20	(- 4)	1294	326	379	232	1.48	7.37	5.57	1.40	1.63
-15	(+ 5)	1668	420	489	266	1.67	9.52	6.28	1.58	1.84
-10	(+14)	2098	529	615	299	1.86	12.02	7.03	1.77	2.06
-5	(+23)	2589	652	759	331	2.05	14.89	7.83	1.97	2.29

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		